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| 09/609,653      | 06/30/2000  | Jeff Schulz          | FORE-69             | 1758             |

7590 03/10/2004

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EXAMINER

NGUYEN, ALAN V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2662

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DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/609,653

Applicant(s)

SCHULZ, JEFF

Examiner

Alan Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11 and 16 is/are rejected.
- 7) ☒ Claim(s) 5-7 and 12-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4, 8-11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Koehler et al (US 6,650,660) hereinafter Koehler.

Regarding **claims 1 and 8** Koehler discloses a method and switch of a network for switching packets comprising:

a plurality of fabrics (***“functional circuitry”; figure 1, element 26***) which switch portions of packets (***column 5, lines 9-14 discloses the 32-bit data packets are transferred to splitting circuitry 16 which splits each of the data packets into 2 16-bit portions which are transferred along to pipes***); and

a port card (***“grouping circuitry”; element 38***) connected to the fabrics and the network (***element 14***) for receiving packets from and sending packets to the network

*(see column 5, lines 44-52), the port card having a mechanism for tolerating whether any one of the plurality of fabrics has a failure and still sending correct packets to the network (column 7, lines 15-17 discloses the data grouper 88 (inside of grouping circuitry 38) is capable of recognizing an error and recovering from an error).*

Regarding claim 16 Koehler discloses a method for switching packets comprising the steps of:

receiving packets at a port card from a network of a switch *(see figure1; column 5, lines 5-14, "transferring 32-bit groups of data from source 12 to splitting circuitry ");*

sending to fabrics of the switch portions of the packets as stripes from the port card *(column 5, lines 9-14 discloses the 32-bit data packets are transferred to splitting circuitry 16 which splits each of the data packets into 2 16-bit portions which are transferred along to pipes) ;*

switching the portions of the packets with the fabrics *(column 5, lines 33-36 discloses each functional circuit processes portions of data packets);*

sending back to the port card the portions of the packers stripes from the fabrics *(column 5, lines 43-47 discloses after processing by the functional circuits, the packets are transferred to the grouping circuitry);*

determining one of the fabrics has a failure *(column 7. lines 15-17, "the data grouper is capable of recognizing an error and recover from it");* and

determining which one of the fabrics has the failure (**column 15, lines 15-40 discloses an example of where an error is detected in data portion 8H (high side fabric)**)).

Regarding **claims 2 and 9** Koehler discloses a switch where the plurality of fabrics includes  $n$  fabrics which receive from and send to the port card portions of packets, where  $n$  is greater than or equal to 2 and is an integer (**see column 6, lines 23-28, "N packet portions"**), where one of the fabrics is a parity fabric which sends to and receives from the port card parity data regarding the packets (**see table 1; column 7, lines 65-67, and column 8, lines 1-8 discloses each packet portion is assigned a code to detect parity errors. Also see column 7, lines 35-42**).

Regarding **claims 3 and 10** Koehler discloses a switch where the tolerating mechanism has a stripper (**"splitter circuitry"; figure 2 element 16**) which sends portions of packets as stripes to the  $n$  fabrics (**elements 52, 54**) to which they correspond, and which calculates a checksum of the packet and adds it to the packet before it is striped (**elements 48, 50; column 5, lines 63-66 discloses the PCODEs are added to the data packet portions and forwarded out. Column 7, lines 36-39 discloses the error detection and recovery of the invention and the functioning of the pipe state machines depends upon the PCODEs associated with each of the portions of each data packet**)).

Regarding **claims 4 and 11** Koehler discloses a tolerating mechanism (**figure 3**) has an unstriper that receives the stripes and parity data from the fabrics, calculates the parity data from the stripes received, and compares the parity data received with the

parity data calculated to determine if one of the fabrics has failed (***"pipe state machine", element 64, 66. Column 15, lines 15-40, discloses an example of where an error is detected in data portion 8H (high side fabric))***).

### ***Allowable Subject Matter***

3. Claims 5-7 and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding **claims 5 and 7** the cited references taken individually or in combination fails to particularly disclose where the unstriper calculates the checksum for each fabric, replaces the data from each fabric in turn, and compares the calculated checksum for each fabric to the checksum calculated for each fabric received with the packet calculated before the packet is striped, if the unstriper has determined one of the fabrics has failed, and recovers the stripe from the fabric that has failed from the other stripes.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to show the state of the art with respect to fault tolerant switch fabrics/switches

US Patent (6,570,881) to Wils et al

US Patent (5,909,427) to Manning et al

US Patent (6,457,140) to Lindberg et al


US Patent (5,812,556) to Schmidt

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 703-305-0369. The examiner can normally be reached on 9am-6pm ET

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVN  
March 4, 2004

  
RICKY NGO  
PRIMARY EXAMINER